

STRENGTHENING MISSOURI'S PUBLIC HEALTH SYSTEM

FOR 2002 AND BEYOND

*Missouri Department of Health
and Senior Services*



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prepared by
The Center for Local Public Health Services
Missouri Department of Health and Senior Services

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WHAT IS PUBLIC HEALTH?

Public health and its benefits to Missourians are not well understood by many. Some people associate public health with immunizations for children and inspection of restaurants. Others see public health as the dedicated “county nurse” visiting older people in their homes. But few realize the broad range of activities and responsibilities for which public health is accountable.

Actually, public health is a sophisticated science for identifying and dealing with real or potential health threats to the community. Public health’s primary purposes are to improve the health of communities, to prevent disease from occurring, and to save lives. An effective public health system:

- assesses and promotes health and safety;
- prevents or minimizes the occurrence of diseases and injuries;
- plans, prepares, and responds to natural and manmade disasters;
- identifies barriers, and facilitates access to primary and preventive health care; and
- enforces public health laws and regulations.

Public health relies upon a diverse group of professionals including nurses, environmental specialists, health educators, administrators, nutritionists, epidemiologists, physicians, and laboratory workers. Others, not usually thought of as public health workers, are also essential to public health work (for example soil scientists, attorneys, engineers, accountants, health educators, and computer program designers). Each of these individuals, with their own unique set of knowledge and skills, and the organizations that employ them, make up the public health system. Working as a system, public health is able to protect citizens from communicable diseases and other threats. Public health workers use surveillance to discover the source of a disease or environmental threat, identify and treat those who may have been exposed, and assure that the threat is reduced or eliminated.

Public health is often confused with health care. A health care provider diagnoses and treats each of his/her individual patients. Public health professionals diagnose whole communities and develop a plan of action to improve the health status of the entire population.

Although the principal role of public health has remained the same, its focus has changed over the years. Early in the 20th century public health efforts were primarily directed to disease prevention. Environmental safeguards, such as assuring the safety of drinking water and sanitary disposal of sewage, along with the development of vaccines and provision of immunizations, greatly reduced disease incidence and increased life expectancy. In the latter part of the 20th century many public health agencies took on the responsibility of providing care to indigent populations. Because expanded insurance coverage has made personal health services more accessible to most people, public health is now able to focus more closely on its principal role of protecting the public.

Entering into the 21st century, public health has many challenges such as new diseases, infections and bioterrorism threats. Rapid transit can bring novel, previously non-existent threats to our communities from a world away in a matter of hours. Building capacity and assuring readiness to confront these challenges is essential.

STRUCTURE OF MISSOURI'S PUBLIC HEALTH SYSTEM

The public health system in Missouri is multi-faceted. The governmental portion of the system includes the Missouri Department of Health and Senior Services (MDHSS), 115 local public health agencies, and various federal agencies including the Centers for Disease Control and Prevention (CDC). This segment of the system works with multiple partners such as other governmental agencies, nurses, physicians, hospitals, laboratories, schools, childcare providers, social service agencies, and faith and civic organizations. Through collaboration among these partners, a public health system exists to serve the people of Missouri.

A workforce of over 3300 professionals serves in the 115 local public health agencies and over 2000 are employed by MDHSS. The true extent of Missouri's public health workforce, which includes many outside of governmental public health agencies, is not known. It is currently estimated that over 500,000 professionals make up the national public health workforce.

Most local public health agencies were formed under Chapter 205, Revised Statutes of Missouri, which permits the counties to pass a property tax measure to support local public health. These public health agencies have an elected Board of Trustees who set policy for their agencies. Locally elected bodies such as county commissions, city or county councils govern the remaining local public health agencies. These agencies are supported by city and/or county general revenue.

Local public health agencies are autonomous and operate independently of each other and of the state and federal public health agencies. However, through contracts, they are connected to MDHSS to create the heart of Missouri's public health system. MDHSS receives funds from CDC and other federal agencies. Much of the federal money, in addition to funding from state general revenue, is distributed to local public health agencies to help support the delivery of public health services in communities throughout Missouri. MDHSS also provides technical support, laboratory services, a communication network, and other vital services to aid local efforts.

MDHSS is one of 13 executive departments in Missouri state government and the state director of health is a member of the governor's cabinet. The department has many legal and professional responsibilities, including inspection and licensing of facilities, data collection and analysis, emergency response, communicable disease control, public education, and laboratory services.

Other state agencies share public health responsibilities with MDHSS and are an important part of the public health system. For example, the Missouri Department of Natural Resources regulates public water supplies, provides air and water pollution control, and solid and toxic waste management. The Missouri Department of Public Safety is responsible for highway and water safety programs and emergency management. In addition, the departments of Social Services, Mental Health, Agriculture, and Elementary and Secondary Education share responsibilities for many health related programs and activities.

WHAT ARE THE CORE FUNCTIONS OF PUBLIC HEALTH?

The core functions of public health describe the fundamental responsibilities of Missouri's public health system. Governmental public health agencies have an obligation to prevent disease and to protect and promote the health of all people within their jurisdiction. This public health obligation can be described as the three (3) core public health functions: assessment, policy development and planning, and assurance.

Assessment gathers information including statistical data and first hand knowledge from people living in a community to determine the major health risks and problems. The *policy development and planning* function uses information from the assessment process to design programs, develop public policy, and implement strategies to reduce risk and improve health. *Assurance* focuses on enforcement of laws, rules and regulations that protect health, and accessibility of quality health services for all members of a community. The Missouri Core Public Health Functions Task Force defined the principal elements and key activities necessary to carry out the core functions of public health for Missouri in 1995. Another way of describing the core of public health is the ten essential services developed by a work group at the Centers for Disease Control and Prevention. The ten essential services are:

- 1) **Monitor health status to identify and solve community health problems:** This service includes assessing health status of people living in the community and identifying threats to health especially for those at higher risk because of environmental or occupational conditions, social or economic situations, or risk behavior.
- 2) **Diagnose and investigate health problems and health hazards in the community:** This service includes active surveillance for infectious and chronic disease and investigation of outbreaks and patterns of disease or injury. This service also includes identifying emerging health threats that require laboratory capacity to conduct screening and testing.
- 3) **Inform, educate, and empower people about health issues:** This service involves providing accessible health information and collaborating with personal health care providers to reinforce health promotion messages. It may also mean working with schools, churches, and worksites to be sure people have the information they need to remain healthy.
- 4) **Mobilize community partnerships and actions to identify and solve health problems:** This service convenes and facilitates community groups in order to define what is needed in the community and to bring resources together for a common purpose.
- 5) **Develop policies and plans that support individual and community health efforts:** This service requires leadership by public health officials to set goals and develop plans for health improvement. It may include development of policies, regulations and legislation to guide public health practice.

- 6) **Enforce laws and regulations that protect health and ensure safety:** This service involves enforcement of sanitary codes for public facilities, protection of drinking water supplies, follow up on hazardous environmental exposures and preventable injuries, and monitoring of medical service and other providers.
- 7) **Link people to needed personal health services and assure the provision of health care when otherwise unavailable:** This service, which is sometimes referred to as outreach, includes assuring that socially disadvantaged people can receive the care they need. This often requires ongoing case management and provision of culturally and language appropriate materials to link special populations to primary and preventive services.
- 8) **Assure a competent public and personal health care workforce:** This service includes education and training for public health and personal health care providers. It includes a process for licensure of professionals and certification of facilities and creation of incentive programs to attract health care providers in underserved areas.
- 9) **Evaluate effectiveness, accessibility and quality of personal and population based health services:** This service requires ongoing evaluation of health programs to assess effectiveness and to gather information for allocating resources.
- 10) **Research for new insights and innovative solutions to health problems:** This service includes linkages with institutions of higher education and research.



THE CORE FUNCTION OF ASSESSMENT

Citizens, health providers, policy makers, and public health professionals need to be involved when local public health agencies conduct a health assessment of the community. Health problems may be easy to identify by merely reviewing and comparing community data to other areas or the state. However, it is more difficult to understand the complex causes of health problems or identify the particular population groups that are most affected. Factors such as income and social status, housing, working conditions, education, crime, and availability of health care providers may contribute to health problems. By involving a wide representation of community members in the assessment process, public health leaders gain a more thorough understanding of underlying issues that contribute to health status problems in a community.

Following are some examples of assessment activities:

- Collect disease surveillance reports from hospitals, physicians, and laboratories, and examine them for unusual occurrence that could signal an outbreak or bioterrorist act
- Register birth and death certificates and compile statistical data from them
- Determine the leading causes of preventable deaths, disability, or injury in a community
- Monitor for environmental or occupational health risks occurring in the community
- Use collected information to determine if behavioral risks contribute to high rates of disease and/or mortality
- Determine if particular groups of people or certain geographic areas are more at risk
- Assess whether there are enough providers of health care to meet the community's need
- Assess whether public policy supports efforts to improve health (example: policy that bans smoking in public places)
- Determine what local citizens believe are the biggest health concerns
- Review results of childhood blood tests for lead exposure

Principal elements and key activities of the core public health function of **assessment** are as follows:

| Principal Elements | Key Activities |
|------------------------------------|---|
| <i>Data Collection</i> | <ul style="list-style-type: none"> ➤ Assess population-based health status and its determinants. ➤ Develop standards and methods of collecting data to ensure reliability, comparability, and validity. ➤ Assess community health care delivery by developing and maintaining data systems for capacity, availability, quality, cost, and utilization of health resources. ➤ Identify barriers to utilization of health services. |
| <i>Data Analysis</i> | <ul style="list-style-type: none"> ➤ Examine assessment data. ➤ Examine resource capacities. ➤ Draw inferences from data. ➤ Analyze and coordinate available community resources. |
| <i>Data Analysis Dissemination</i> | <ul style="list-style-type: none"> ➤ Report results of analysis to appropriate audiences, including state/local health care providers. ➤ Respond to requests for information. |
| <i>Data Management</i> | <ul style="list-style-type: none"> ➤ Continually improve the quality, utilization, and access to data. ➤ Develop and maintain the infrastructure necessary to support the data system. |



THE CORE FUNCTION OF POLICY DEVELOPMENT AND PLANNING

After the assessment process is completed, many communities ask, “Where do we go from here?” Action steps to bring about improvement in health status begin with planning and policy development. The likelihood of success in achieving goals improves when the involvement of community members increases. Having diverse groups participating in the process helps to assure that consideration is given to political, organizational, and community values. Community participation is vital in prioritizing community health problems, sharing information, and subsequently empowering and mobilizing to solve the problems.

The state legislature performs the policy development function when it deliberates and passes legislation. In communities, the local public health agencies perform the policy development and planning function when they use assessment information to set priorities. Local agencies work in collaboration with their governing bodies, or other local policy makers, to develop policy, allocate resources, and implement strategies to improve the health of their communities.

Examples of planning and policy development activities include:

- Identify the most significant health risks and problems and bring people in the community together to solve them
- Identify existing community assets and resources that can be used in reducing health problems and removing health risks
- Use data, information and scientific evidence to inform decisions about what needs to be done
- Enact ordinances to prevent problems from occurring (e.g., an ordinance related to the inspection of food establishments)
- Set standards of practice for health professionals, facilities, businesses, and employers to assure quality care and a healthy and safe environment for all residents and visitors
- Encourage schools, childcare providers, businesses and other partners to adopt health-promoting policies.
- Emergency response planning

Principal elements and key activities of the core public health function of *policy development and planning* are as follows:

| Principal Elements | Key Activities |
|--|--|
| <i>Planning</i> | <ul style="list-style-type: none"> ➤ Lead the community in a systematic and periodic process to identify community priorities and desired outcomes. ➤ Formulate and prioritize alternative solutions. ➤ Develop strategies to achieve desired outcomes. ➤ Identify costs and effects of proposed strategies. |
| <i>Policy Analysis & Formulation</i> | <ul style="list-style-type: none"> ➤ Review policies and procedures within the existing legal scope of authority. ➤ Involve the community in developing and analyzing policies within the public health jurisdiction. ➤ Identify community and agency resources. ➤ Identify costs and effects of proposed policies. |
| <i>Legal Authority Establishment</i> | <ul style="list-style-type: none"> ➤ Identify the public health jurisdiction's legal authority to develop, implement, and enforce public health policy. ➤ Promote state and local legislation and regulation appropriate for implementing core public health functions. |
| <i>Policy Implementation</i> | <ul style="list-style-type: none"> ➤ Translate adopted policies into operating program procedures. ➤ Involve and educate affected parties and communities. ➤ Perform timely assessment of adopted policy(ies) and associated programs. ➤ Identify need for change in policy(ies) and/or programs, evaluate them on a regular basis and communicate the findings. |



THE CORE FUNCTION OF ASSURANCE

The core public health function of assurance promises a minimum level of capacity to perform essential public health services. Communities rely upon public health to respond to critical situations and emergencies such as disease outbreaks, natural disasters, or bio-terrorism events. Assurance implies that laws, rules, and ordinances enacted to protect and improve health are enforced. Assurance includes monitoring the quality of health services, assuring that childcare centers are safe, and that contaminants in air, food, water, and the environment are eliminated.

While it is the responsibility of local public health agencies to assure necessary health resources are available, the actual provision of health services comes from many sources in the community. The role of the governmental public health agency is to work with providers to foster collaboration and build systems to assure that all residents have access to preventive services and health care. Assurance requires good resource management and strong community leadership skills.

Examples of assurance activities include:

- Inspect food establishments and childcare facilities for health and safety standards
- Enforce laws that protect health
- Investigate disease outbreaks such as food-borne illnesses
- Make sure that people who have been exposed to a communicable disease receive treatment
- Immunize children and adults to prevent disease
- Participate in development of emergency plans
- Respond to public health emergencies whether caused by unsafe food or water, natural or manmade disaster, or disease outbreak
- Provide health promotion, education, and disease prevention programs in the community
- Educate health providers about public health issues
- Inspect health care facilities for compliance with standards
- Reach out to people at high risk for specific conditions or diseases
- Work with community partners to establish health or dental care services if not enough are available in the community
- Provide limited health care services for vulnerable populations

Principal elements and key activities of the core public health function of *assurance* are as follows:

| Principal Elements | Key Activities |
|---------------------------|--|
| <i>Health Protection</i> | <ul style="list-style-type: none"> ➤ Achieve compliance with appropriate laws and regulations related to public health protection activities and licensure or certification of providers and facilities. ➤ Assure the competence of individuals whose activities can affect the health of the public who are not otherwise licensed or monitored by the state. ➤ Maintain expertise adequate to implement protection activities. ➤ Respond to emergencies through collaboration with communities in developing and implementing local and statewide emergency response plans for natural and manmade disasters, including the mobilization of resources. |
| <i>Disease Prevention</i> | <ul style="list-style-type: none"> ➤ Prevent or control diseases, illnesses and injury. ➤ Assure that prevention and intervention efforts for communicable diseases and other preventable conditions are being appropriately implemented. |
| <i>Health Promotion</i> | <ul style="list-style-type: none"> ➤ Assure communities have the information, resources, and strategies they need to maximize the health of their residents. ➤ Assure the public has access to culturally appropriate, accurate, and current information that they need to make decisions about their health care options. |
| <i>Quality Standards</i> | <ul style="list-style-type: none"> ➤ Assure that quality population-based care is provided according to established standards and guidelines. ➤ Assure that all health care providers have access to ongoing training and continuing professional education. |
| <i>Access to Care</i> | <ul style="list-style-type: none"> ➤ Assure populations have access to personal health and safety services. ➤ Collaborate with the community generally, and health care providers specifically, to reduce barriers to accessing health care and personal and preventive health services, and assure that individuals and families are linked with health services. ➤ Assure an adequate supply and distribution of high quality provider services. ➤ Assure populations have access to outreach services. ➤ Assure that infrastructure supports the reduction of barriers to access to services. |

CHALLENGES TO MISSOURI'S PUBLIC HEALTH SYSTEM

The capacity of individual local public health agencies to effectively perform the core functions and essential services of public health is dependent on level of funding, public health workforce expertise, and organizational competency.

Funding that will sustain a strong public health system has historically been lacking across the United States, as well as in Missouri. Financial support comes from local, state and federal sources. At all levels there has been a lack of understanding of public health's unique but essential role and responsibility, therefore, it has not been a priority in allocation decisions by policy makers. The level of local financial support varies from one jurisdiction to another. For some, budgets are able to support only a minimal level of capacity while others are able to support a more sophisticated system.

Emerging threats and realities of bioterrorism and new strains of infectious diseases tax an understaffed and sometimes ill-prepared public health workforce. West Nile encephalitis, salmonella, E.coli, anthrax, smallpox or dengue fever could present a challenge to any community in Missouri. Expertise related to community leadership, organizational management, data collection and analysis, surveillance, program evaluation, epidemiology, and health communication are but a few of the long list of abilities needed at all levels of the public health system. Personnel prepared with scientific and analytical skills are difficult to recruit, especially in rural communities. These essential skills are often learned on the job or through targeted training opportunities coordinated by MDHSS. However, many agencies do not have the depth of staff or the financial resources to take advantage of training that is made available to them.

Vital segments of Missouri's public health system are its 115 local public health agencies. Nearly 50% of these public health jurisdictions serve populations of less than 20,000, and nearly 80% serve populations less than 40,000. Local agencies are often expected to address gaps in service, providing personal health care rather than focusing their limited resources on essential public health services. Individually, it is difficult for a small agency to justify the need for, or to pay qualified public health professionals.

Each local agency is relied upon to take the lead in situations that pose a threat to a community; yet varying levels of organizational capacity will limit the public's confidence in the overall system.

The public has the right to expect that federal, state, and local resources to support a strong public health system will be allocated and used wisely to continuously improve system capacity.

ENDING THOUGHTS

The public health system in Missouri promises to make life better for every resident or visitor. Public health is complex; it works in countless different ways. Many of these ways are invisible - those who benefit may not be aware of the protection they are given. A system of public health assures that the food and water you consume is safe, that the air you breathe meets quality standards, and that people are protected from communicable, environmental and occupational diseases. Public health works silently, continuously assessing the health status of communities, responding to bioterrorism or other emergencies, making plans and policies to reduce risks, and implementing programs to improve health. Since a community is only as healthy as its most fragile members, public health also pays careful attention to see that vulnerable populations can access the services they need.

Prevention costs less than treatment. One must consider the avoided cost of medical care, lost wages of workers, as well as lost productivity for employers to quantify how much is gained when illness is prevented and people stay healthy. Public health is an investment that yields significant economic return.

- The cost of lost productivity due to high lead levels in the United States is estimated at \$105 billion annually. The proportion of Missouri children with elevated blood-lead levels is three times higher than the national average.
 - ❖ Public health is striving to reduce the burden of lead poisoning among Missouri's children through widespread testing and case management of lead poisoned children.
- The cost of medical care for people with tobacco related illnesses is estimated at \$1.5 billion annually in Missouri. Missouri Medicaid spends about \$182 million annually on smoking related illness. Reducing tobacco use by just 5% could save Medicaid \$1.7 million each year.
 - ❖ With resources from the Master Settlement Agreement, public health along with its partners from other organizations could reduce tobacco use.
- The overall rate of obesity among Missouri's population increased from 24 percent to 35.6 percent from 1987 to 1998. Regular physical activity decreased from 39 percent to 30 percent in the same period. The actual cause of 85 percent of premature deaths is behavior; therefore most premature deaths are preventable.
 - ❖ Public health develops, implements and evaluates nutrition education initiatives. By working with communities, interventions demonstrated to be effective in increasing physical activity can be implemented. Public health providers and policy makers can help people become healthier.

- If public health scrutiny of food handling practices and associated education of food service workers results in even one less outbreak of a foodborne illness, the return on investment could be enormous.
 - ❖ Public health workers inspect food service facilities and grocery stores regularly to assure that food is safely handled and stored. Other safeguards to protect the public include education for food service workers, embargo of unsafe products, and programs to immunize food service employees against hepatitis A.

These are just a few of the hundreds of ways that public health returns upon investment. Beyond economic gain, public health efforts improve quality of life and dramatically increased life expectancy in the United States during the last century.

While the medical care system treats one patient at a time, the public health system strives to improve the health of the entire population of the state of Missouri, helping people live longer and better. Public health benefits everyone, everyday, everywhere.



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